

RCRA HAZARDOUS WASTE MANAGEMENT FACILITY

Completeness Checklist

RCRA RECORDS CENTER  
FACILITY Pratt & Whitney Main St  
I.D. NO. CTD 990672081  
FILE LOC. R-1B  
OTHER RDMS #2707

Facility name PRATT & WHITNEY

Facility address \_\_\_\_\_

EPA identification number \_\_\_\_\_

Type of facility \_\_\_\_\_

Facility contact \_\_\_\_\_

Date application received 5-5-84

Date checklist completed \_\_\_\_\_

Permit review team \_\_\_\_\_

1/17/84

Part 270	Part 264	Subject Requirement	Provided	Not Applicable	Location in Application	Comments
270.10(d) and 270.13		Part A Requirements				
270.13(g)	-	Statement that facility is new or existing				
270.13(g)	-	Statement that application is first or revised				
270.13(m)	-	Description of business conducted				
270.13(c)	-	SIC Codes				
270.13(a)	-	Description of activities requiring permit				
270.13(b)	-	Facility: Name				
270.13(b)	-	Mailing Address				
270.13(b)	-	Location				
270.13(b)	-	Latitude and Longitude				
270.13(h)(1)	-	Scale drawing (existing facility only)				
	-	Sufficient detail				
270.13(l)	-	Topographic Map				
	-	Sufficient detail				
270.13(i)	-	Other map				
	-	Sufficient detail				
270.13(h)(2)	-	Photographs (existing facilities only)				
	-	Sufficient detail				
270.13(e)	-	Owner: Name				
	-	Address				
	-	Telephone				
270.13(d)		Operator: Name				
	-	Address				
	-	Telephone				

Part 270	Part 264	Subject Requirement	Provided	Not Applicable	Location in Application	Comments
270.13(d)	-	Identification of facility ownership status and status as Federal, State, private, public, or other entity	_____	_____	_____	_____
270.13(f)	-	Statement that facility is or is not on Indian lands	_____	_____	_____	_____
270.13(k)	-	Listing of all permits and construction approvals received/applied for	_____	_____	_____	_____
270.13(j)	-	List of 40 CFR 261 wastes and annual amounts to be handled	_____	_____	_____	_____
270.13(i)	-	Description of all processes to be used to handle wastes and design capacity of each process	_____	_____	_____	_____
Part A Certification and Signatories						
270.11(d)	-	Certification paragraph	_____	_____	_____	_____
270.11(a)	-	Appropriate signatory	_____	_____	_____	_____

Part 270	Part 264	Subject Requirement	Provided	Not Applicable	Location in Application	Comments
270.14		Part B General Information Requirements				
270.14(b)(1)		- General description of the facility				
270.14(b)(2)	264.13(a)	- Chemical and physical analysis of hazardous wastes to be handled	✓			not enough detail
270.14(b)(3)		- Waste analysis plan	✓			
	264.13(b) (1)-(5)	- Analysis parameters with rationale	✓			
		- Test methods for analyzing parameters X				
		- Procedure for collecting representative samples	✓			
		- Frequency of analyses	✓			
		- List and description of waste analyses to be generator supplied		✓		
	264.13(b)(6) and 264.17(c)	- Waste analysis procedures for ignitable, reactive, incompatible wastes	✓			
	264.13(c)	- Procedures to determine identity of each waste movement	✓			exhibit K
		- Procedures for collecting representative samples	✓			
270.14(b)(4)		- Security description for active portion of facility	✓			
	264.14(a)	- Security procedures waiver justification		✓		
		- Unknowning/unauthorized contact with waste not harmful		✓		
		- Unknowning/unauthorized disturbance of waste or equipment cannot cause violation of Part 264		✓		

Part 270	Part 264	Subject Requirement	Provided	Not Applicable	Location in Application	Comments
270.14(b)(4)	264.14(b)	- Description of 24-hour surveillance system	✓			
		- Description of artificial or natural barriers	✓			
		- Description of controlled entry/egress procedures	✓			
	264.14(c)	- Description of warning signs	✓			
		- List of languages on signs	✓			
		- Statement of 25-foot legibility	✓			
		- Description of sign locations and numbers of signs	✓			
270.14(b)(5)		- General Inspection Schedule and Procedures Description	✓			
	264.15(b)(1)	- Written schedule	✓			listed and computerized
	264.15(b)(2) and 265.15(d)	- Statement as to where, at facility, inspection schedule and inspection records will be kept	✓			computerized
	264.15(b)(1)	- Identification of equipment/processes to be inspected	✓			
	264.15(b)(3)	- Identification of types of problems each equipment/process to be checked for	✓			
	264.15(b)(4)	- Frequency of inspections by equipment/process	✓			
	264.15(c)	- Schedule of remedial action	✓			
270.14(b)(5) and 270.17(d)	264.15(a) and 264.226	- Specific Inspection Requirements for Surface Impoundments	NA			
		- Description of procedures for	NA			
		- Inspection of liners/covers during and immediately after installation	NA			
264.174 264.194		• CONTAINERS • TANKS	See Page 42 See Page 42			

Part 270	Part 264	Subject Requirement	Provided	Not Applicable	Location in Application	Comments
270.14(b)(5) and 270.17(d)	264.15(a) and 264.226	- Inspections weekly and after storms for				
		- Operation of overtopping controls				
		- Sudden drop in impoundment liquid level				
		- Presence of liquid in leak detection system				
		- Integrity of dikes/containment devices				
		- Statement from qualified engineer that structural integrity of dikes will be certified upon construction completion				
		- Qualified engineer's certification of dike integrity for				
		- Stress				
		- Piping/scouring				
270.14(b)(5) and 270.18(e)	264.15(a) and 264.254	- Specific Inspection Requirements for Waste Piles				
		- Description of procedures for				
		- Inspection of liners/covers during and immediately after installation				
		- Inspections weekly and after storms for				
		- Operation of run-on/run-off controls				
		- Liquids in leak detection system				
		- Proper functioning of wind dispersal controls				
		- Leachate in and proper operation of leachate collection/removal system				

Part 270	Part 264	Subject Requirement	Provided	Not Applicable	Location in Application	Comments
270.14(b)(5) and 270.20(c)(5)	264.15(a) and 264.273(g)	- Specific Inspection Requirements for Land Treatment Units				
		- Description of procedures for units inspections weekly and after storms for				
		- Operation of run-on/run-off controls				
		- Function of wind dispersal controls				
270.14(b)(5) and 270.21(d)	264.15(a) and 264.303	- Specific Inspection Requirements for Landfills				
		- Description of procedures for				
		- Inspection of liners/covers during and immediately after installation				
		- Inspections weekly and after storms for				
		- Operation of run-on/run-off controls				
		- Liquids in leak detection system				
		- Proper functioning of wind dispersal controls				
		- Leachate in and proper operation of leachate collection/removal system				
270.14(b)(6)	Part 264 Subpart C	- Preparedness and Prevention Documentation	✓	✓		
		- Waiver(s) request and justification		✓		
	264.32(a)	- Description of internal communications/ alarm system(s)				
	264.34(a)	- Documentation of personnel access to internal communication/alarm system(s)				
	264.32(b)	- Description of external communications/ alarm system(s)				
	264.36(b)	- Documentation of personnel access to external communications/alarm system(s)				

Part 270	Part 264	Subject Requirement	Provided	Not Applicable	Location in Application	Comments
270.14(b)(6)	264.32(c)	- Description of fire control/ extinguishing, spill control, and decontamination equipment	✓			
	264.32(d)	- Documentation of adequate water volume and pressure for above equipment	✓			
	264.33	- Documentation of equipment testing/ maintenance schedule and procedures	✓			
	264.35	- Documentation of adequate aisle space				
	264.37 (also 264.52(c))	- Documentation and descriptions of arrangements or attempts at arrangements with;				
		- Police department(s)				P&W
		- Fire department(s)				HAS
		- Hospitals				ITB
		- Local emergency response teams				OWN
		- State emergency response teams				RESPONSE
		- Emergency response contractors				TEAMS!
		- Equipment suppliers				
	264.37(a)(2)	- Documentation of agreements designating primary emergency authority				
270.14(b)(7)	Part 264 Subpart D	- Contingency Plan Documentation	✓			
	264.51 and 264.52(a)	- Criteria for implementation of contingency plan	✓			
	264.52(d)	- Emergency Coordinators Identification	✓			
		- Names	✓			
		- Addresses	✓			



Part 270	Part 264	Subject Requirement	Provided	Not Applicable	Location in Application	Comments
270.14(b)(7)		- Home/Work Phones	✓			
	264.55	- Documentation of Qualifications	0			
		- Documentation of Authority	0			
		- Description of notification procedure	✓			
	264.52(e)	- Emergency equipment list	✓			
		- Documentation of equipment location				DESCR - map within the book
		- Physical description of equipment	✓			
		- Statement of equipment capabilities				none
	264.52(f)	- Evacuation Plan	✓			
		- Criteria for implementation	✓			
		- Description of signal(s) to implement	✓			voice! - PA soon
		- Description of primary and alternate routes	✓			
	264.53	- Contingency Plan Copy Location				
		- Description of location of facility's copy of plan				
		- Number of duplicate copies distributed and their location				
	264.54	- Contingency Plan Amendment				
		- Identification of person responsible and authorized to change/amend plan				
		- Description of procedure to change/amend facility copy of plan				
		- Description of procedure to insure update of all copies of plan				

Part 270	Part 264	Subject Requirement	Provided	Not Applicable	Location in Application	Comments
270.14(b)(7)	264.56	- Detailed Emergency Procedures				
		- Procedure for facility personnel notification				
		- Procedure for state/local agency notification				
		- procedure for identification of character, source, amount, and areal extent of released materials				
		- Procedure for assessment of environment/human health hazards				
		- Identification of On-Scene Coordinator for geographic area				
		- Description of specific responses and control procedures for				
		- Fire				
		- Explosion				
		- Spill				
		- Description of process shutdown and monitoring procedures				
		- Description of cleanup procedures and associated material treating, storing, disposal procedures				
		- Description of emergency equipment cleaning and refitting procedures				
		- Description of procedures to insure incompatible waste segregation during cleanup				
270.14(b)(7) and 270.17(f)	264.227	- Specific Contingency Plan Requirements for Surface Impoundments				
		- Procedure for stopping waste addition to impoundment				

Part 270	Part 264	Subject Requirement	Provided	Not Applicable	Location in Application	Comments
	264.227	<ul style="list-style-type: none"> <li>- Procedure for containing leakage</li> <li>- Procedure to prevent catastrophic failure</li> <li>- Procedure for emptying impoundment</li> <li>- Procedure for recertifying and reactivating impoundment</li> <li>- Procedure for closing impoundment</li> </ul>				
<p>[Note: There are no §122.25 requirements which parallel Part 264, Subpart E. However, the applicant should be familiar with the following sections of the regulations since the requirements in them <u>will</u> be enforceable under any permit received. Part 264, Subpart E, §264.70 through §264.77 Part 270, Subpart C, §270.30(j) and §270.30(l) The applicant should be prepared to respond to inquiries by the permit application reviewers regarding these requirements]</p>						
270.14(b)(8)		<ul style="list-style-type: none"> <li>- Preventive Procedures, Structures, and Equipment Documentation, including descriptions of equipment/procedures to               <ul style="list-style-type: none"> <li>- Prevent hazards during unloading operations</li> <li>- Prevent run-off and flooding</li> <li>- Prevent water supply contamination</li> <li>- Mitigate equipment failure and power outages</li> <li>- Prevent undue personnel exposure to wastes</li> </ul> </li> </ul>	✓			
270.14(b)(9)	264.17	<ul style="list-style-type: none"> <li>- Prevention of Accidental Ignition or Reaction Documentation               <ul style="list-style-type: none"> <li>- Description of separation and protection of ignitable, reactive, incompatible wastes</li> <li>- Description of ignitable, reactive, incompatible wastes handling procedures</li> <li>- Description of number, location, and type of warning/prohibition signs</li> </ul> </li> </ul>	✓			<p>possible problem - trucks which can't be unloaded quickly - stored in another place</p>
264.176		• CONTAINERS	SEE	PAGE	43	
264.177		• CONTAINERS	SEE	PAGE	43	
264.178		• TANKS	SEE	PAGE	44	
264.179		• TANKS	SEE	PAGE	44	

Part 270	Part 264	Subject Requirement	Provided	Not Applicable	Location in Application	Comments
		- Documentation that procedures are adequate to prevent accidental ignitions or reactions	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		- Description of number, location, and type of warning/prohibition signs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		- Documentation that procedures are adequate to prevent accidental ignitions or reactions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
270.14(b)(9) and 270.17(h) and 270.17(i)	264.17(b) and 264.229	- Specific Ignitable/Reactive Waste Requirements for Surface Impoundments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		- Procedures that render waste nonreactive or nonignitable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		- Procedures for preventing reactions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		- Procedures for protecting wastes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		- "Emergency use only" documentation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	264.230	- Incompatible waste segregation or protection procedures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
270.14(b)(9) and 270.18(g) and 270.18(h)	264.17(b) and 264.256	- Specific Ignitable/Reactive Waste Requirements for Waste Piles	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		- Procedures that render waste nonreactive or nonignitable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		- Procedures for preventing reactions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		- Procedures for protecting wastes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	264.257	- Incompatible waste segregation or protection procedures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
270.14(b)(9) and 270.20(g) and 270.20(h)	264.17(b) and 264.281	- Specific Ignitable/Reactive Waste Requirements for Land Treatment Facilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		- Documentation that application to soil renders waste nonreactive/nonignitable, and prevents reactions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		- Procedures for protecting wastes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Part 270	Part 264	Subject Requirement	Provided	Not Applicable	Location in Application	Comments
	264.282	- Procedures which insure that incompatible wastes are not applied to same treatment zone				
270.14(b)(9) and 270.21(f) and 270.21(g)	264.17(b)	- Specific Ignitable/Reactive Waste Requirements for Landfills				
	264.312	- Procedures that render wastes nonreactive and nonignitable				
		- Procedures for preventing reactions				
		- Procedures for protecting wastes				
	264.313	- Procedures for insuring that incompatible wastes will not be disposed of in same landfill cell				
	264.316 (c)-(e)	- Procedures for identifying contents and insuring proper landfilling of incoming labpacks				
270.14(b)(10)		- Traffic Documentation*				
		- Identification of:				
		- Waste movement routes				
		- Number of movements by type vehicle	✓			100 Tanks 250 Tanks/year
		- Quantity of waste moved per movement per vehicle	✓			80,000 lbs
		- Traffic control sign personnel	✓			
		- Route surface composition and load bearing capacity	✓			
270.14(b)(11)		- Facility Location Documentation	✓			
270.14(b)(11) (i) and (ii)		- Political jurisdiction identified (new facilities only)		✓		
		- Comparison to Appendix VI of Part 264	✓	✓		

\*There are no standards in Part 264 for traffic movement. The information that must be submitted with the Part B permit application, as required by 270.14(b)(10), will be used by the Agency to evaluate safety at the facility.

Part 270	Part 264	Subject Requirement	Provided	Not Applicable	Location in Application	Comments
		- Demonstration that faults with displacement in Holocene time are more than 3000 feet from facility	✓			
	264.18(a)	- Demonstration that no faults pass within 200 feet of sites where T/S/D to be conducted	✓			
270.14(b)(11) (iii)-(iv)	264.18(b)	- Documentation of facility location relative to 100-year flood plain level or wave action flooding	✓			
		- Documentation that facility can withstand the 100-year flood without washout of hazardous waste by:				
		- Analysis of hydrodynamic/hydrostatic forces resulting at site from 100-year flood, and				
		- Presentation of operating units and flood protection devices design and how they will prevent washout, or				
		- Plan for removal of waste before washout including,				
		- Timing of removal relative to flood levels				
		- Estimated time to remove all waste				
		- Location to which waste will be moved and proof of compliance with Parts 122 through 124 and 264 through 267 of this Chapter				
		- Detailed description of personnel, equipment, and procedures for waste removal sufficient to insure availability in time for use				
		- Analysis of potential for discharge during waste movement				

Part 270	Part 264	Subject Requirement	Provided	Not Applicable	Location in Application	Comments
270.14(b)(11)(v)		- A plan documenting how and on what time schedule the facility will comply with §264.18(b) if not in compliance (existing facilities only).		+		
270.14(b)(12)	264.16	- Personnel Training Program Documentation	✓			
		- Outline of introductory and continuing personnel training program	✓			
		- Identification and qualifications of program instructor	✓			
		- Brief description of how training program meets actual job task	✓			
		- Description of procedures to insure all appropriate personnel receive appropriate training and receive annual training review	✓			
		- Description of records to be kept, their location, and procedures to insure they are retained for proper length of time	✓			
270.14(b)(13)	264.112	- Closure Plan Documentation	✓			
		- Description of partial and final closure procedures	✓			needed for TANKS
		- Description of maximum unclosed portion during facility life	✓			
		- Estimate of maximum waste inventory in storage/treatment during facility life	✓			TABLE J-1
	264.114	- Equipment decontamination procedure	✓			
		- Estimated year of closure	✓			not expected to close
	264.113	- Description of closure schedule including	✓			
		- Total time to close	✓			

\*This documentation on Personnel Training must be included in the application. The remaining three items may be included at the applicant's discretion.

Part 270	Part 264	Subject Requirement	Provided	Not Applicable	Location in Application	Comments
270.14(b)(13)	254.113	- Trackable intervening closure activities				<i>not given</i>
		- Location(a) and number of copies of closure plan				
		- Identification of person responsible for storage and updating of facility copy of closure plan				
		- Procedure for updating all other copies of closure plan				
270.14(b)(13) and 270.17(g)	264.112 and 264.228(a)	- Specific Closure Plan Requirements for Surface Impoundments				
		- Procedures for removal and/or decontamination of all wastes and materials/equipment associated with the impoundment, or				
		- Detailed plans and engineering reports describing				
		- Elimination of free liquids				
		- Stabilization of remaining wastes				
		- Design of final cover demonstrating				
		- Liquid migration minimization				
		- Function with minimum maintenance				
		- Drainage promotion				
		- Erosion/abrasion minimization				
		- Settling/subsidence accommodation				
		- Permeability less than liner or subcells				

264,178 CONTAINERS  
264,197 TANKS  
264,351 INCINERATORS

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Part 270	Part 264	Subject Requirement	Provided	Not Applicable	Location in Application	Comments
270.14(b) (13) and 270.18(i)	264.112	- Specific Closure Plan Requirements for Waste Piles				
	264.258(a)	- Procedure for removal and/or decontamination of all wastes and materials/equipment associated with the waste pile				
	264.258(b)	- Procedure for closing in conformance with landfill closing requirements				
270.14(b) (13) and 270.20(f)	264.112	- Specific Closure Plan Requirements for Land Treatment Facilities				
	264.280(a)	- Procedures to maximize degradation of waste in treatment zone				
		- Procedures to minimize waste run-off				
		- Run-off system maintenance procedures				
		- Wind dispersal control procedures				
		- Procedures for compliance with food-chain crop growth				
		- Procedures for unsaturated zone monitoring				
		- Description of vegetative cover				
		- Procedures for establishing vegetative cover				
270.14(b) (13) and 270.21(e)	264.112 and 264.310(a)	- Specific Closure Plan Requirements for Landfills				
		- Detailed plans and an engineering report which describes the final cover components in detail				
		- Documentation that the final cover will				
		- Provide long-term minimization of migration of liquids through closed landfill				

Part 270	Part 264	Subject Requirement	Provided	Not Applicable	Location in Application	Comments
		- Function with minimum maintenance				
		- Promote drainage and minimize erosion/abrasion				
		- Settle/subside without losing integrity				
		- Be less permeable than bottom liners or subsoils				
270.14(b) (13)	264.117 and 264.118	- Post-Closure Plan Documentation				
		- Description of ground water monitoring activities and frequencies				
		- Description of maintenance activities and frequencies for;				
		- Final containment structures				
		- Facility monitoring equipment				
		- Location(s) and number of copies of post-closure plan				
		- Identification and location (address and phone number) of person responsible for storage and updating of facility copy of post-closure plan prior to closure				
		- Identification and location (address and phone number) of person responsible for storage and updating facility copy of post-closure plan during post-closure period				
		- Procedure for updating all other copies of post-closure plan				
270.14(b) (13) and 270.17(g)	264.118 and 264.228(b)	- Specific Post-Closure Plan Requirements for Surface Impoundments				
		- Procedures for maintenance and repair of final cover				

Part 270	Part 264	Subject Requirement	Provided	Not Applicable	Location in Application	Comments
		- Procedures for maintenance and monitoring of leak detection system				
		- Procedures for maintenance and monitoring of ground water monitoring system				
		- Procedures for compliance with Subpart F				
		- Procedures for preventing run-on/run-off final cover damage				
270.14(b) (13) and 270.18(i)	264.118 and 264.258(b)	- Specific Post-Closure Plan Requirements for Waste Piles				
		- Procedures for post-closure care that meet the requirements for landfills				
270.14(b) (13) and 270.20(f)	264.118 and 264.280(c)	- Specific Post-Closure Plan Requirements for Land Treatment Facilities				
		- Procedures to enhance degradation of wastes in treatment zone				
		- Procedure for maintaining vegetative cover				
		- Procedure for maintaining run-on controls				
		- Procedure for maintaining run-off controls				
		- Procedures for wind dispersal control				
		- Procedures to insure compliance with food-chain crop prohibitions				
		- Procedures for unsaturated zone monitoring				
270.14(b) (13) and 270.21(e)	264.118 and 264.310(b)	- Specific Post-Closure Plan Requirements for Landfills				
		- Procedures for maintenance and repair of final cover				
		- Monitoring and maintenance procedures for leak detection system				

Part 270	Part 264	Subject Requirement	Provided	Not Applicable	Location in Application	Comments
		- Procedure for leachate collection/removal system operation				
		- Procedures to maintain and monitor ground water monitoring system				
		- Procedures for compliance with Subpart F				
		- Procedures for preventing final cap erosion due to run-on and run-off				
		- Procedures for protection and maintenance of benchmarks				
	264.310(c)	- Procedures to be undertaken if liquid is found in leak detection system				
270.14(b) (14)	264.120	- Documentation of Notice on Deed (existing facilities only)				
		- Statement that land used to manage wastes				
		- Statement of restricted use per §264.117(c)				
	264.119	- Documentation of type, location, and quantity of wastes filed with local authority and EPA Regional Administrator				
270.14(b) (15)	264.142	- Closure Cost Estimate	✓			
	264.143 and 264.146	- Documentation of a financial assurance mechanism for closure that is:				
	264.151(a)	- Closure trust fund				
	264.151(b)	- Surety bond guaranteeing payment				
	264.151(c)	- Surety bond guaranteeing performance				
	264.151(d)	- Closure letter of credit				
	264.151(e)	- Closure insurance				
	264.151(f) and (h)	- Financial test and corporate guarantee	✓			

Part 270	Part 264	Subject Requirement	Provided	Not Applicable	Location in Application	Comments
		- Multiple financial mechanism for one facility				
		- Single financial mechanism for multiple facilities	✓			
270.14(b) (16)	264.144	- Post-Closure Cost Estimate				
	264.145 and 264.146	- Documentation of a financial assurance mechanism for post-closure that is;				
	264.151(a)	- Closure trust fund				
	264.151(b)	- Surety bond guaranteeing payment				
	264.151(c)	- Surety bond guaranteeing performance				
	264.151(d)	- Post-closure letter of credit				
	264.151(e)	- Post-closure insurance				
	264.151(f) and (h)	- Financial test and corporate guarantee				
		- Multiple financial mechanism for one facility				
		- Single financial mechanism for multiple facilities	✓			
270.14(b) (17)	264.147	- Documentation of Insurance	✓			
		- Request for variance from insurance		✓		
	264.151(i) and (j)	- Insurance for sudden/accidental occurrences	✓			
		- Insurance for nonsudden/accidental occurrences		✓		
	264.151(g)	- Financial test for liability coverage				

Part 270	Part 264	Subject Requirement	Provided	Not Applicable	Location in Application	Comments
270.14(b) (18)	264.149	- Documentation of a State Required Financial Mechanism for Closure, Post-Closure, or Liability including				
		- EPA I.D. number				
		- Facility name				
		- Facility address				
		- Amounts of liability coverage or funds assured				
	264.150	- Documentation of State Assumed Responsibility for Closure Post-Closure or Liability including				
		- Letter from State describing State's responsibilities				
		- Facility EPA I.D. number				
		- Facility name				
		- Facility address				
270.14(b) (19)		- Topographic map showing a distance of 1000 feet around facility at a scale of not more than 1 inch equals 200 feet that clearly shows	✓			
		- Contours	✓			
		- Proper contour intervals	✓			2 ft.
		- Map scale and date	✓			
		- 100-year flood plain area	✓			
		- Surface waters and intermittent streams	✓			
		- Surrounding land uses	✓			

Part 270	Part 264	Subject Requirement	Provided	Not Applicable	Location in Application	Comments
270.14(b) (19)		- Wind rose	✓			
		- North orientation	✓			
		- Legal boundaries of facility site	✓			
		- Access control	✓			
		- Injection and withdrawal wells onsite and offsite		✓		
		- Buildings and recreation areas	✓			
		- Runoff control systems				
		- Access and internal roads	✓			
		- Storm, sanitary, and process sewerage systems	✓			
		- Loading and unloading areas	✓			
		- <u>Fire control facilities</u>				
		- Barriers for drainage or flood control	✓			
		- Location of past or present operational units and equipment cleanup areas		✓		
270.17		Specific Part 8 Information Requirements for Surface Impoundments				
270.17(a)		- List of hazardous wastes placed or to be placed in impoundment				
270.17(b)	264.221	- Detailed plans and an engineering report describing				
270.17(b)(1)	264.221(a)	- Liner system construction (new only)				
	264.221(a)(1)	- Material of construction				
		- Chemical properties				
270.15	CONTAINERS , 264.175, 264.176, 264.177		SEE PAGES 46-49			
270.16	TANKS , 264.191, 264.192, 264.198, 264.199		SEE PAGES 49-50			
270.19	INCINERATORS , 270.62		SEE PAGES 52-67			

Part 270	Part 264	Subject Requirement	Provided	Not Applicable	Location in Application	Comments
270.17(b)(1)		- Physical strength				
		- Thickness				
	264.221(a)(2)	- Foundation design/integrity				
	264.221(a)(3)	- Area covered				
	264.221(a)(1)	- Liner system integrity against (new only)				
		- Internal and external pressure gradients				
		- Contact with waste/leachate				
		- Climatic conditions				
		- Installation stresses				
		- Daily operational stresses				
	264.221(b)	- Liner system exemption including				
		- Nature and quantity of wastes				
		- Alternative design and operation				
		- Impoundment location description				
		- Hydrogeologic setting				
		- Attenuative capacity of materials between impoundment and groundwater and surface water				
		- Documentation of no migration to ground/surface waters at any future time				
270.17(b)(2)	264.221(c)	- Procedures/equipment to prevent overtopping from				
		- Normal operation				



Part 270	Part 264	Subject Requirement	Provided	Not Applicable	Location in Application	Comments
270.17(b)(2)	264.221(c)	- Abnormal operation				
		- Overfilling				
		- Wind/wave action				
		- Rainfall				
		- Run-on				
		- Equipment malfunctions				
		- Human error				
270.17(b)(3)	264.221(d)	- Structural integrity of dikes				
270.17(c)	264.222(a)	- Documentation for Part 264, Subpart F exemption including,				
		- Impoundment and liner location above seasonal highwater table				
		- Two liners meeting §264.221(a) requirements				
		- Leak detection system between liners				
270.18		- Specific Part B Information Requirements for Waste Piles				
270.18(a)		- List of hazardous wastes placed or to be placed in each waste pile				
270.18(b)	264.250(c)	- Documentation of general exemption from §264.251 and Part 264, Subpart F, including,				
		- Waste pile protection from precipitation				
		- Procedures for insuring liquids are not placed in pile				
		- Description of run-on controls				

Part 270	Part 264	Subject Requirement	Provided	Not Applicable	Location in Application	Comments
		- Description of wind dispersal controls other than wetting				
		- Decomposition/reactions do not cause leachate generation				
270.18(c)	264.251(a)	- Detailed plans and an engineering report describing,				
270.18(c)(1)	264.251(a)(1)	- Liner system construction (new only)				
	264.221(a)	- Material of construction				
		- Chemical properties				
		- Physical strength				
		- Thickness				
		- Foundation design/integrity				
		- Area covered				
		- Liner system integrity against (new only)				
		- Internal and external pressure gradients				
		- Contact with waste/leachate				
		- Climatic conditions				
		- Installation stresses				
		- Daily operational stresses				
	264.251(a)(2)	- Leachate collection and removal system to maintain less than one foot of leachate on liner including,				
		- Materials of construction				

Part 270	Part 264	Subject Requirement	Provided	Not Applicable	Location in Application	Comments
270.18(c)(1)		- Chemical resistance to waste/leachate				
		- Strength sufficient to prevent collapse				
		- Provisions to prevent clogging				
	264.251(b)	- Liner system/leachate system exemption including,				
		- Nature and quantity of wastes				
		- Alternative design and operation				
		- Pile location description				
		- Hydrogeologic setting				
		- Attenuative capacity of materials between pile, ground and surface waters				
		- Documentation of no migration to ground/surface waters at any future time				
270.18(c)(2)	264.251(c)	- System for control of run-on from peak discharge of a 25-year storm				
270.18(c)(3)	264.251(d)	- System for control of run-off water volume of a 24-hour, 25-year storm				
270.18(c)(4)	264.251(e)	- Procedures to manage collection and holding facilities associated with run-on and run-off control systems				
270.18(c)(5)	264.251(f)	- Wind dispersal control procedures				
270.18(d)	264.252(a)	- Documentation for Part 264, Subpart F exemption including,				
		- Pile and liners above seasonal high water table				

Part 270	Part 264	Subject Requirement	Provided	Not Applicable	Location in Application	Comments
270.18(d)		- Two liners meeting requirements of §264.251(a)(1)				
		- Leak detection system between liners				
		- Leachate system meeting §264.251(a)(2) requirements				
	264.253(b)	- Documentation for Part 264, Subpart F exemption including,				
		- Pile and liners above seasonal high water table				
		- Liner meets §264.251(a)(1) requirements				
		- Soil characteristics/depths				
		- Leachate system meets §264.251(a)(2) requirements				
		- Schedule/procedures for liner inspection by waste removal				
		- Sufficient liner strength/thickness to allow periodic removal/replacement of wastes				
270.18(f)		- Description of treatment carried out in or on the pile including,				
		- Details of treatment process				
		- Equipment used				
		- Nature and quality of residuals				
270.20		- Specific Part B Information Requirements for Land Treatment Facilities				
270.20(a)		- Description of treatment demonstration plans by				
	264.272(b)	- Field test				

Part 270	Part 264	Subject Requirement	Provided	Not Applicable	Location in Application	Comments
270.20(a)		- Laboratory analysis				
		- Available data				
		- Operating data (existing units only)				
		- Submittal for laboratory analyses or field test demonstration permit including,				
	264.272(c)	- Documentation of accurate simulation				
		- Wastes and hazardous constituents descriptions (Part 261, Appendix VIII)				
		- Climatologic information				
		- Topographical data				
		- Operating practices				
		- Type of test to be conducted				
		- Test materials and methods				
		- Expected completion time				
		- Statement on appropriateness of demonstration				
		- Statement on human health and environment protection considering,				
		- Characteristics of wastes to be tested				
		- Operating and monitoring during tests				
		- Duration of test				
		- Volume of waste used in test				

Part 270	Part 264	Subject Requirement	Provided	Not Applicable	Location in Application	Comments
		- Potential for hazardous waste migration to ground/surface waters (field tests only)				
270.20(b)	264.271(a)	- Description of land treatment program				
		- Wastes to be land treated				
		- Design measures to maximize treatment including,				
270.20(b)(2)(i)	264.273(a)	- Rate and method of waste application				
		- Soil pH control measures				
		- Microbial/chemical reaction enhancements				
		- Treatment zone moisture control measures				
270.20(b)(3)	264.278(a)-(f)	- Unsaturated zone monitoring procedures including,				
		- List of and rationale for selecting compounds to be monitored				
		- Monitoring equipment, procedures, frequency				
		- Procedures for selecting sampling locations				
		- Sample collection procedures				
		- Sample preservation/shipment procedures				
		- Sample chain of custody control				
		- Sample analysis procedures				

Part 270	Part 264	Subject Requirement	Provided	Not Applicable	Location in Application	Comments
		- Background value determination procedures				
		- Statistical methods description				
270.20(b)(4)		- List of hazardous constituents expected to be in, or derived from, wastes to be land treated				
270.20(b)(5)	264.271(c)	- The proposed vertical and horizontal dimensions of the treatment zone with maximum depth of				
		- No more than 5 feet from the initial soil surface				
		- More than 3 feet above the seasonal high water table				
270.20(c)	264.273 (b)-(f)	- Description of land treatment unit design				
		- Procedures/equipment to prevent run-on from peak discharge of 25-year storm				
		- Procedures/equipment to collect and control the run-off water volume from a 24-hour, 25-year storm				
		- Procedures/equipment to minimize run-off from treatment zone during active life				
		- Run-on and run-off collection and control systems management plan				
		- Procedures/equipment for wind dispersal control				
270.20(d)	264.276(a)	- Documentation of request for growth of food-chain crops on treatment zone not receiving cadmium in wastes				

Part 270	Part 264	Subject Requirement	Provided	Not Applicable	Location in Application	Comments
270.20(d)	264.276(a)	- Statement that demonstration of no risk to human health will be conducted by,				
		- Field tests				
		- Greenhouse studies				
		- Available data				
		- Operating data (existing only)				
		- Demonstration program description, including				
		- Soil pH				
		- Cation exchange capacity of soil				
		- Specific wastes to be applied				
		- Waste application rates				
		- Waste application methods				
		- Identification of demonstration crops				
		- Planting and growth procedures				
		- Characteristics of crop				
		- Sample selection criteria				
		- Sample collection procedure				
		- Sample size				
		- Analyses methods				
		- Statistical data evaluation procedures				
		- Identification of comparison crops				
		- Characteristics of crop				



Part 270	Part 264	Subject Requirement	Provided	Not Applicable	Location in Application	Comments
270.20(d)	264.276(a)	- Planting and growth procedures	_____	_____	_____	_____
		- Conditions of growth	_____	_____	_____	_____
		- Sample selection criteria	_____	_____	_____	_____
		- Sample collection procedures	_____	_____	_____	_____
		- Sample size	_____	_____	_____	_____
		- Analyses methods	_____	_____	_____	_____
		- Statistical data evaluation procedures	_____	_____	_____	_____
		- Request for a permit to conduct demonstration program	_____	_____	_____	_____
270.20(e)	264.276(b)	- Documentation of request for growth of food-chain crops on treatment zone if wastes contain cadmium	_____	_____	_____	_____
		- Cadmium concentration in waste	_____	_____	_____	_____
		- Soil pH	_____	_____	_____	_____
		- Annual application of cadmium in kilograms per hectare	_____	_____	_____	_____
		- Soil cation exchange capacity	_____	_____	_____	_____
		- Identification of animal feeds to be grown	_____	_____	_____	_____
		- Plan to prevent animal feed ingestion by humans	_____	_____	_____	_____
		- Documentation of notice on deed	_____	_____	_____	_____
270.21		- Specific Part B Information Requirements for Landfills	_____	_____	_____	_____
270.21(a)		- List of hazardous wastes to be placed in each landfill cell	_____	_____	_____	_____

Part 270	Part 264	Subject Requirement	Provided	Not Applicable	Location in Application	Comments
270.21(b)	264.301(a)	- Detailed plans and an engineering report describing				
270.21(b)(1)	264.301(a)(1)	- Liner system construction (new only)				
		- Material of construction				
		- Chemical properties				
		- Physical strength				
		- Thickness				
		- Foundation design/integrity				
		- Area covered				
		- Liner system integrity against (new only)				
		- Internal and external pressure gradients				
		- Contact with waste/leachate				
		- Climatic conditions				
		- Installation stresses				
		- Daily operational stresses				
	264.301(a)(2)	- Leachate collection and removal system to maintain less than one foot of leachate on liner including,				
		- Materials of construction				
		- Chemical resistance to waste/leachate				
		- Sufficient strength to prevent collapse				

Part 270	Part 264	Subject Requirement	Provided	Not Applicable	Location in Application	Comments
270.21(b)(1)		- Provisions to prevent clogging	_____	_____	_____	_____
	264.301(b)	- Liner system/leachate system exemption including,	_____	_____	_____	_____
		- Nature and quantity of wastes	_____	_____	_____	_____
		- Alternative design and operation	_____	_____	_____	_____
		- Landfill location description	_____	_____	_____	_____
		- Hydrogeologic setting	_____	_____	_____	_____
		- Attenuative capacity of materials between landfill and ground and surface waters	_____	_____	_____	_____
		- Documentation of no migration to ground/surface waters at any future time	_____	_____	_____	_____
270.21(b)(2)	274.301(c)	- System for control of run-on from peak discharge of a 25-year storm	_____	_____	_____	_____
270.21(b)(3)	274.301(d)	- System for control of run-off water volume from a 24-hour, 25-year storm	_____	_____	_____	_____
270.21(b)(4)	274.301(e)	- Procedures to manage collection and holding facilities associated with run-on and run-off control systems	_____	_____	_____	_____
270.21(b)(5)	274.301(f)	- Wind dispersal control procedures	_____	_____	_____	_____
270.21(c)	264.302(a)	- Documentation for Part 264, Subpart F exemption including,	_____	_____	_____	_____
		- Landfill and liners above seasonal high water table	_____	_____	_____	_____
		- Two liners meeting requirements of §264.301(a)(1)	_____	_____	_____	_____

Part 270	Part 264	Subject Requirement	Provided	Not Applicable	Location in Application	Comments
		- Leak detection system between liners				
		- Leachate system meeting §264.301(a)(2) requirements				
270.21(h)	264.314	- Documentation of procedures/equipment for landfilling liquid wastes				
270.21(i)	264.315	- Documentation of procedures/equipment for landfilling containers				
270.14(c)	Part 264 Subpart F	Part B Protection of Ground Water Information Requirements for Surface Impoundments, Waste Piles, Land Treatment Units, and Landfills				
270.14(c)(1)		- Interim status period ground-water monitoring data summary				
270.14(c)(2)		- Identification of uppermost and hydraulically interconnected aquifers under facility including,				
		- Water flow rate and direction				
		- Bases for identification				
270.14(c)(3) and 270.14(b)(19)		- Topographic map				
	264.95(b)	- Delineation of property boundary				
	264.95(b)	- Delineation of waste management area				
	264.95(a)	- Delineation of proposed point of compliance				
		- Ground-water monitoring well locations				
		- Location of aquifers				
270.14(c)(4)		- Descriptions of existing contamination				
		- Delineation of plume extent				

Part 270	Part 264	Subject Requirement	Provided	Not Applicable	Location in Application	Comments
		- Appendix VIII constituents concentrations				
		- Concentrations throughout plume				
		- Maximum concentrations in plume				
270.14(c)(5)	264.97	- Detailed plans and an engineering report of Ground Water Monitoring Program				
	264.97(a)	- Description of wells				
		- Number of wells				
		- Locations				
		- Depths				
		- Assurance of unaffected background water measurement				
		- Assurance of compliance point ground water measurement				
	264.97(c)	- Casing description				
	264.97(d)	- Description of sampling/analysis procedures				
		- Sample collection methods				
		- Sample preservation/shipment				
		- Analytical procedures				
		- Chain of custody control				
	264.97(e)	- Documentation of proper/adequate analytical procedures				
	264.97(f)	- Procedure for determination of ground water elevation with each sample				
270.14(c)(6)	264.91(a)(4) and 264.98	- Description of Detection Monitoring Program including,				

Part 270	Part 264	Subject Requirement	Provided	Not Applicable	Location in Application	Comments
270.14(c)(6)(i)	264.93 and 264.98(a)	- List of indicator parameters, waste constituents, reaction products to be monitored for, including				
		- Type, quantities, concentrations expected in wastes				
		- Mobility, stability, persistence in unsaturated zone				
		- Detectability in ground-water				
270.14(c)(6)(iii)	264.98(a)(4) and 264.98(c)(1)	- Background ground-water concentration values and coefficients of variation established by				
	264.98(c)(3)	- Use of an appropriate ground water monitoring system, and				
	264.97(g)(1)	- Quarterly sampling of upgradient wells for one year, or				
	264.97(g)(3)	- Quarterly sampling of other wells for one year, and				
	264.97(g)(4)	- Data from a minimum of one sample/well and minimum of four samples per quarter, or				
		- Presentation of procedures to calculate such values				
270.14(c)(6)(ii)	264.98(b)	- Description of an appropriate ground-water monitoring system to be installed at the compliance point				
270.14(c)(6)(iv)	264.98(d)	- Procedures for collecting semi-annual ground-water samples at the compliance point during				
		- Active life				
		- Closure period				

Part 270	Part 264	Subject Requirement	Provided	Not Applicable	Location in Application	Comments
		- Post-closure period	_____	_____	_____	_____
	264.98(e)	- Procedure for annual determination of uppermost aquifer flow rate and direction	_____	_____	_____	_____
	264.98(f) & 264.97(d)&(e)	- Documentation of sample collection and analysis procedures	_____	_____	_____	_____
	264.98(g)	- Procedure for determining a statistically significant increase for any monitored parameter or constituent by	_____	_____	_____	_____
		- Comparing compliance point data to background value data using the procedures in §264.97(h)(1) or (2), and	_____	_____	_____	_____
		- Providing an estimate of the time period after sampling completion necessary to obtain results	_____	_____	_____	_____
270.14(c)(6)	264.98(h)	- Procedure to be implemented if a statistically significant increase in any constituent or parameter is identified at any compliance point monitoring well, including	_____	_____	_____	_____
	264.98(h)(1)	- Written notification to Regional Administrator	_____	_____	_____	_____
	264.98(h)(2)	- Sample collection and analysis methods for all Appendix VIII constituents at all monitoring wells	_____	_____	_____	_____
	264.98(h)(3)	- Method for establishing Appendix VIII constituent background values	_____	_____	_____	_____
	264.98(h)(4)	- Preparation of an application for permit modification to establish compliance monitoring	_____	_____	_____	_____

Part 270	Part 264	Subject Requirement	Provided	Not Applicable	Location in Application	Comments
270.14(c)(7)	264.91(a)(1) and 264.99	- Description of Compliance Monitoring Program, including				
		- List of wastes previously handled at facility				
		- Characterization of contaminated ground-water				
		- Hazardous constituents identified				
		- Hazardous constituents concentrations				
	264.99(b)	- Description of compliance monitoring system at the compliance point				
		- List of hazardous constituents to be compliance monitored				
	264.96	- Proposed compliance period				
	264.99(d)	- Procedure for collecting quarterly samples at compliance point during compliance period				
	264.99(c)(3)	- Procedures for establishing background concentration values for constituents that are based on				
		- Use of an appropriate ground-water monitoring system, and				
	264.97(g)	- Data that is available prior to permit issuance				
		- Data that accounts for measurement errors in sampling and analysis				
		- Data that accounts for seasonal ground-water quality fluctuations				
		- Data from a minimum of one sample per well and a minimum of four samples from monitoring system, each time system is sampled				



Part 270	Part 264	Subject Requirement	Provided	Not Applicable	Location in Application	Comments
270.14(c)(7) (iv)	264.92 and 264.99(c) (1),(2)	- Proposed concentration limits for constituents with justification based on	_____	_____	_____	_____
		- §264.94(a)(1) and §264.97(g)	_____	_____	_____	_____
		- §264.94(a)(2)	_____	_____	_____	_____
		- §264.94(b) and §264.99(c)(1)	_____	_____	_____	_____
	264.99(e)	- Procedure for annual determination of uppermost aquifer flow rate and direction	_____	_____	_____	_____
	264.99(f)	- Procedures for annual testing of all compliance point wells for Appendix VIII constituents	_____	_____	_____	_____
	264.99(g)	- Documentation of all sampling and analysis procedures	_____	_____	_____	_____
	264.99(h)	- Procedures for determining a statistically significant increase for any monitored constituent by	_____	_____	_____	_____
		- Comparing compliance point data to the concentration limit using the procedure in §264.97(h)(2)	_____	_____	_____	_____
		- Providing an estimate of the time period after sampling completion necessary to obtain results	_____	_____	_____	_____
	264.99(i)	- Procedures to be implemented if the ground-water protection standard is exceeded at any compliance point monitoring well, including	_____	_____	_____	_____
	264.99(i)(1)	- Written notification to Regional Administrator	_____	_____	_____	_____
	264.99(i)(2)	- Preparation of an application for permit modification to establish a corrective action program, including	_____	_____	_____	_____
			_____	_____	_____	_____

Part 270	Part 264	Subject Requirement	Provided	Not Applicable	Location in Application	Comments
		- Details of program to comply with ground-water protection standard	_____	_____	_____	_____
270.14(c)(7)(v)	264.99(i)(2)(ii)	- Details of ground-water monitoring to demonstrate effectiveness of program	_____	_____	_____	_____
270.14(c)(8)	264.91(a)(2) and 264.100	- Description of Corrective Action Program, including	_____	_____	_____	_____
270.14(c)(8)(i)		- Characterization of contaminated ground-water	_____	_____	_____	_____
	264.100(a)(1)	- Identified hazardous constituents	_____	_____	_____	_____
		- Concentrations of hazardous constituents	_____	_____	_____	_____
270.14(c)(8)(ii)	264.100(a)(2)	- Concentration limit for each hazardous constituent	_____	_____	_____	_____
270.14(c)(8)(iii)	264.100(b)	- Detailed plan and an engineering report describing the corrective actions to be taken at the compliance point	_____	_____	_____	_____
	264.100(c)	- Time period necessary to implement corrective action program	_____	_____	_____	_____
270.14(c)(8)(iv)	264.100(d)	- Description of ground-water monitoring program that will be sufficient to assess the adequacy of corrective action	_____	_____	_____	_____
	264.91(a)(3) and 264.100(e)	- Description of the corrective action to be taken for constituents in ground-water between compliance point and downgradient facility boundary	_____	_____	_____	_____
	264.100(g)	- Procedure and content for semi-annually submitting written reports to the Regional Administrator on program effectiveness	_____	_____	_____	_____
Part B Certification and Signatories						
270.11(d)		- Certification paragraph	_____	_____	_____	_____
270.11(a)		- Appropriate signatory	_____	_____	_____	_____

COMPLETENESS CHECKLIST (continued)

	Provided	Not provided	Not applicable	Comments
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~~F-2a~~ ~~Preparedness and prevention requirements for specific process requirements~~

F-2b(1) Description of procedures and schedule for specific requirements for containers including weekly inspections of containers, container storage areas and containment system(s) (40 CFR Section 264.174)

F-2b(2) Description of procedures and schedule for specific requirements for tanks including daily inspections of overfilling control equipment, data gathered from monitoring equipment and level of waste in uncovered tanks; weekly inspections of above ground portion of the tank, and area immediately surrounding the tank; and regular inspections as needed to detect cracks, leaks, corrosion, erosion or wall thinning in the tank (40 CFR Section 264.194(a) and (b))

~~F-2c~~ ~~Preparedness and prevention requirements (40 CFR Sections 264.25(a)(6), 264.32 and 264.35)~~

~~F-2d~~ ~~Equipment requirements (40 CFR Section 264.12)~~

COMPLETENESS CHECKLIST (continued)

	Provided	Not provided	Not applicable	Comments
<del>F-5a</del>	_____	_____	_____	_____
<del>F-5b</del>	_____	_____	_____	_____
F-5c	_____	_____	_____	_____
F-5d	_____	_____	_____	_____

~~Demonstration of the specific precautions used to prevent ignition or reaction of ignitable or reactive wastes (40 CFR Sections 122.25(a)(9), 264.17(a) and (c))~~

~~Demonstration of the general precautions for handling ignitable or reactive wastes or mixing incompatible wastes (40 CFR Sections 122.25(a)(9), 264.17(b) and (c))~~

For containers, a detailed description of the facility operating procedures which demonstrate compliance with ignitable or reactive waste requirements and compliance with buffer zone/location/container separation requirements for ignitable or reactive waste (40 CFR Sections 122.25(b)(1)(iii), 264.176)

If incompatible wastes are stored, a description of the procedures used to insure compliance with the regulations for incompatible waste/material storage in the same container(s) (40 CFR Sections 122.25(b)(1)(iii), 264.177)

COMPLETENESS CHECKLIST (continued)

		Provided	Not provided	Not applicable	Comments
F-5e	For tanks, a description of operational procedures for handling and storage of ignitable or reactive wastes, including the use of buffer zones (40 CFR Sections 122.25(b)(2)(vi), 264.198)	_____	_____	_____	_____
F-5f	If incompatible wastes are stored, a description of the procedures used to insure compliance with the regulations for incompatible waste/material storage in the same tank(s) (40 CFR Sections 122.25(b)(2)(vi), 264.199(b))	_____	_____	_____	_____
<del>EMERGENCY PLAN</del>					
<del>(40 CFR Sections 122.25(a)(7), 264.50 thru 264.56)</del>					
<del>A copy of the contingency plan or amended SPCC plan</del>					
G-1	<del>A general description of the facility</del>	_____	_____	_____	_____
G-2	<del>A list of emergency coordinator's names and phone numbers (40 CFR Sections 264.52(j), 264.55)</del>	_____	_____	_____	_____
G-3	<del>A list of criteria for implementation of the plan (40 CFR Sections 264.52(a), 264.56(d))</del>	_____	_____	_____	_____

COMPLETENESS CHECKLIST (continued)

CFR 127.100000

Provided	Not provided	Not applicable	Comments
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~~I-1d(1)~~ A description of procedures for inventory removal and decontamination or disposal of facility equipment during final closure, and the criteria to be used for determining contamination. (40 CFR Section 264.112(a)(3) and 264.114)

~~I-1d(2)~~ For storage containers, a detailed description of how at closure all hazardous waste and hazardous waste residues will be removed from the containment system, and how remaining contaminated containers, liners, and bases will be decontaminated or removed (40 CFR Section 264.170)

I-1d(2) For storage tanks, a detailed description of how at closure all hazardous waste and hazardous waste residues will be removed from tanks and how the area will be decontaminated (40 CFR Section 264.197)

I-1e An estimate of the schedule of final closure, including the expected year of closure and a milestone chart depicting the total time required to close the facility and the time required for intervening closure activities (40 CFR Section 264.112(a)(4))

COMPLETENESS CHECKLIST (continued)

~~C-11~~ Description of frequency of analyses  
(40 CFR section 264.13(b)(4))

~~C-12~~ Description of inspection of off-  
site generated wastes  
(40 CFR section 264.13(b))

~~C-13~~ Description of the methods used to meet  
additional waste analysis requirements  
necessary for storing or treating ignit-  
able, reactive or incompatible wastes  
(40 CFR Sections 264.13(b)(6),  
264.17)

Provided Not provided Not applicable Comments

D. PROCESS INFORMATION

D-1 Containers

D-1a Containers with free liquids

D-1a(1) Primary containment devices:  
a description of the dimensions,  
construction materials, liner speci-  
fications (with container manufac-  
turer's specifications, if available),  
condition and number of containers, and  
demonstration of compatibility of waste  
with containers  
(40 CFR Sections 122.25(b)(1)(i)(A),  
264.171 and 264.172)

COMPLETENESS CHECKLIST (continued)Containers

		Provided	Not provided	Not applicable	Comments
D-1a(2)	Description of container management practices (opening, handling, and storage procedures) to insure container integrity (40 CFR Section 264.173)	_____	_____	_____	_____
D-1a(3)	Design and operation specifications for secondary containment system including a drawing of all the design aspects of the containment system (40 CFR Sections 122.25(b)(1), 264.175(b))	_____	_____	_____	_____
D-1a(3)(a)	Demonstration of structural integrity of base underlying containers, and ability of bases to contain spills, leaks, and accumulated precipitation (40 CFR Section 264.175(b)(1))	_____	_____	_____	_____
D-1a(3)(b)	Description of how containment system design promotes drainage or how containers are kept from contact with free standing liquids (40 CFR Sections 122.25(b)(1)(i)(D), 264.175(b)(2))	_____	_____	_____	_____
D-1a(3)(c)	Description of containment system capacity relative to the number and volume of containers to be stored (40 CFR Sections 122.25(b)(1)(i)(C), 264.175(b)(3))	_____	_____	_____	_____



COMPLETENESS CHECKLIST (continued)

		Provided	Not provided	Not applicable	Comments
D-1a(3)(d)	Description of containment system provisions for preventing or managing run-on (40 CFR Sections 122.25(b)(1)(i)(D), 264.175(b)(4))	_____	_____	_____	_____
D-1a(4)	Description of procedures for detecting and removing accumulated liquids from the containment system in a timely manner (40 CFR Sections 122.25(b)(1)(i)(E), 264.175(b)(5))	_____	_____	_____	_____
D-1b	Containers without free liquids				
D-1b(1)	Documentation/information showing that the wastes do not contain free liquids (40 CFR Section 122.25(b)(1)(ii)(A))	_____	_____	_____	_____
D-1b(2)	Primary containment devices; a description of the dimensions, construction materials, liner specifications (with container manufacturer's specifications, if available), condition and number of containers, and demonstration of compatibility of waste with containers (40 CFR Sections 264.171 and 264.172)	_____	_____	_____	_____

COMPLETENESS CHECKLIST (continued)

- D-1b(3) Description of container management practices (opening, handling, and storage procedures) to insure container integrity (40 CFR Section 264.173).  
 D-1b(4) Container storage area drainage system; a description of how design promotes drainage and removal of precipitation or how containers are kept from contact with free standing liquids (40 CFR Sections 122.25(b)(1)(ii)(B), 264.175(c))  
 D-2 Tanks  
 D-2a References to design standards or other available information used in tank design construction, and information about tank dimensions, capacity, and shell thickness and other parameters needed to assess conformance with standards (40 CFR Sections 122.25(b)(2), 264.191)  
 D-2b Description of design specifications including identification of construction and lining materials for assessment of corrosion and erosion potential (40 CFR Sections 122.25(b)(2)(ii), 264.192(a))

Provided	Not provided	Not applicable	Comments
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11-1111

COMPLETENESS CHECKLIST (continued)

		Provided	Not provided	Not applicable	Comments
D-2c	Diagrams of piping, instrumentation, and process flow, and a description of feed systems, safety cut-off, bypass systems, and pressure controls (e.g., vents) (40 CFR Sections 122.25(b)(2)(iv) and (v), 264.192(b))				
<del>D-2</del>	<del>Waste piles (reserved)</del>				
<del>D-4</del>	<del>Surface improvements (reserved)</del>				
<del>D-5</del>	<del>Incinerators (reserved)</del>				
<del>GROUND WATER MONITORING PROGRAM (REQUIRED)</del>					
<del>PROCEDURES TO PREVENT HAZARDS</del>					
<del>D-1</del>	<del>Security</del>				
<del>D-1a</del>	<del>Description of security procedures and equipment (40 CFR Sections 264.14, 122.25(a)(4))</del>				
<del>D-1b(1)</del>	<del>24-hour surveillance system (40 CFR Section 264.14(b)(1))</del>				
	OR				

Subject requirement	40 CFR section Nos.
<b>PART C - WASTE CHARACTERISTICS</b>	
<b>C-1 Chemical and Physical Analyses</b>	
<p>For each hazardous waste incinerated at the facility, a general description of the waste, the hazard characteristics, the basis for hazard designation, and a laboratory report detailing the chemical and physical analyses of representative samples. At a minimum, the analyses should include identification of each major constituent and its percentage in the waste, heat value, viscosity, quantification of any Part 261 Appendix VIII constituents, chlorine content, solids content and particle size, flashpoint, and moisture content.</p>	122.25(a)(2) 264.11(b) 122.25(b)(5) 122.27(b)(1)
<b>C-2 Waste Analysis Plan</b>	
<p>A copy of the Waste Analysis Plan that describes how the analyses required to allow proper treatment of hazardous wastes will be carried out. For incinerators the plan should discuss the sampling, monitoring analytical techniques, and calculations required to determine chlorine (as HCl) removal efficiency; the HCl mass balance for each PMIC, and particulate (PM and O<sub>3</sub>) concentrations in the stack exhaust. For the trial burn plan the location of sampling and monitoring points should be identified. To determine the fate of PMIC's, sampling and analysis of ash residues and scrubber water and sludges as well as feed and stack gas are required; sampling and analytical techniques used should also be discussed in the waste analysis plan.</p>	122.25(a)(3) 264.13(b) and (c)
<b>C-2a Parameters and Rationale</b>	
<p>A list of parameters chosen for analysis and an explanation of the rationale for their selection.</p>	264.13(b)(1) 264.341
<b>C-2b Test Methods</b>	
<p>A description of test methods used to test for parameters chosen.</p>	264.13(b)(2)
<b>C-2c Sampling Methods</b>	
<p>A list of the sampling methods used to obtain a representative sample of each waste to be analyzed.</p>	264.13(b)(3) 261, Appendix I

Subject Requirement	40 CFR Section Nos.
D-1b(1)(b) Engineering Description of Incinerator	122.27(b)(1)(11)
D-1b(1)(b)(1) Manufacturer's name and model number	122.27(b)(2)(11)(n <sub>1</sub> )
D-1b(1)(b)(2) Type of incinerator (e.g., liquid injection, rotary kiln, etc.)	122.27(b)(2)(11)(n <sub>2</sub> )
D-1b(1)(b)(3) Length and cross-section area of the combustion chamber	122.27(b)(2)(11)(n <sub>3</sub> )
D-1b(1)(b)(4) Description and type of auxiliary fuel system	122.27(b)(2)(11)(n <sub>4</sub> )
D-1b(1)(b)(5) Description of capacity of primary fan or blower and description of the equipment and instrumentation to continuously monitor and record the combustion gas velocity. Mfg's fan curves may also be included to evaluate prime mover.	122.27(b)(1)(11)(E) 264.145
D-1b(1)(b)(6) Description of automatic waste feed cut-off system(s). This should include engineering drawings and narrative of what conditions or circumstances result in activation of waste feed cutoff and also a description of the valves, sensors, and other instrumentation.	122.27(b)(2)(11)(n <sub>6</sub> )
D-1b(1)(b)(7) Detailed description and engineering drawings of pollution control systems and stack gas monitoring instrumentation. Stack gas monitors should include at a minimum, instrumentation to continuously monitor and record CO levels.	122.27(b)(2)(11)(n <sub>7</sub> ) 264.147

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 122.27(b)(2)(11)(n<sub>101</sub>)

Subject requirement	40 CFR section Nos.
D-1b(1)(b)(8) Description and/or engineering drawings of nozzles, conveyors, or other waste introduction equipment. Also detailed description and drawings of burner design including location and orientation of waste, auxiliary fuel, combustion air and, secondary air, nozzles, plenums, air locks, and other inlets for waste, air, or fuel.	122.27(b)(2)(11)(Bg)
D-1b(1)(b)(9) Construction materials of incinerator, pollution control equipment, pumps, piping, ductwork, valves and instrumentation such as thermocouples, probes for pressure differential incinerators, flame sensors, or other items that come into contact with the waste, waste constituents, or combustion products.	122.27(b)(2)(11)(Bg)
D-1b(1)(b)(10) Engineering drawings showing the location of temperature, pressure, and flow indicating, recording and control devices. Mfg's equipment and instrumentation specifications should be included. This must include instrumentation to <u>continuously monitor and record waste feed rate</u> .	122.27(b)(2)(v)(j)- 264.345(1)
D-1b(1)(c) <u>Sampling and Monitoring Procedures</u>  See Subject Requirement C, Waste Characteristics.	122.27(b)(2)(11)(C)
D-1b(1)(d) <u>Test Schedule</u>	122.27(b)(2)(11)(D)
D-1b(1)(d)(1) Dates when shake-down and trial burn are planned	122.27(b)(2)(11)(D)
D-1b(1)(d)(2) The duration of each test burn	122.27(b)(2)(11)(D)
D-1b(1)(d)(3) The quantity of waste to be burned during each test burn	122.27(b)(2)(11)(D)

Subject requirement	49 CFR section Nos.
<p>D-1b(1)(e) <u>Test Protocol for Each Waste or Significant Waste Variation</u></p>	<p>122.27(b)(2)(11)(E)</p>
<p>Significant variations would include such items as increases in PMHC levels; increases in levels of other hazardous constituents; change in ease of combustibility such as a decrease in waste heating values and increases in solids or halogen content.</p>	
<p>D-1b(1)(e)(1) Temperature at which each test burn will take place, the applicant should specify test burns for at least two temperatures unless he is confident that operating and performance standards will be met at the designated combustion temperature. Usually, and especially when auxiliary fuel is necessary, the applicant will want to establish the minimum temperature at which all requirements will be met. This will also serve to establish the temperature at which automatic waste feed cutoff systems will be activated. If a temperature range is given in the Part A application, the permit writer should specify at least the lower temperature as a condition of the draft permit so that a "worst case" operating condition is used for at least one test burn.</p>	
<p>D-1b(1)(e)(2) A waste feed rate for each test burn. The applicant will again want to test at more than one feed rate. To optimize the feed rate, the applicant will want to determine the maximum feed rate. If a feed rate range is given in the permit application, the permit writer should specify the upper limit of the range as a condition of the draft permit so that "worst case" operating parameters are used during at least one test burn.</p>	

Subject requirement	40 CFR section Nos.
<p>D-1b(1)(e)(3) Combustion gas velocity for each test burn should be established. Where systems have a blower(s) with one output rate (i.e., not adjustable), the output, should be designated in scfm at the specified system pressure drop.</p>	
<p>D-1b(1)(e)(4) An auxiliary fuel feed rate for each test burn.</p>	122.27(b)(2)(11)(F)
<p>D-1b(1)(f) <u>Operating Conditions for Pollution Control Devices</u>  A description of conditions for pollution control devices including the following: (where applicable)  (1) Pressure drops across equipment scrubbers and fabric filters;  (2) Temperature of inlet gases for quench tanks, scrubbers, fabric filters and ESP's; (3) Liquid/gas ratios for quench tanks and scrubbers and gas flow for fabric filters and ESP's; (4) pH of scrubbing liquid for scrubbers. Corrosiveness of inlet gas for fabric filters; (5) Moisture content of inlet gases for fabric filters and ESP's; (6) Rapping interval, intensity, and duration for ESP's; (7) Resistivity of particulates in gas stream and applied voltage and current density for ESP's.</p>	122.27(b)(2)(11)(F)
<p>D-1b(2) <u>Results of Trial Burn</u></p>	122.27(b)(5)(1) 122.27(b)(5)(111)
<p>See Section C-2 Waste Characterization</p>	
<p>D-1b(1) <u>Certification</u>   Submission of trial burn data must be signed and certified by a principal executive officer of at least the level of vice-president. Certification in accordance with 122.27 required only of data obtained pursuant to an approved trial burn.</p>	122.27(b)(v1)(1)



Subject requirement	40 CFR section Nos.
<u>C-2d Frequency of Analyses</u>	264.13(h)(4)
A description of the frequency at which the analyses will be repeated for the trial burn and for operation thereafter. For an on site facility this will be whenever there is a process change or as often as needed to verify consistency of the waste feed.	
<del>C-2b Waste Analysis Methods</del>	264.13(c)
<u>Offsite</u>	
<del>A description of the procedures used to inspect and analyze wastes generated offsite that includes procedures to determine their identity and sampling methods used.</del>	
<b>PART D - SPECIFIC PROCESS INFORMATION</b>	
<b><u>D-1 Incinerators</u></b>	
<b><u>D-1a Justification for Exemption</u></b>	122.25(b)(5)(i) 264.340(b)
The applicant should have documentation including waste analysis to show that the waste exhibits only the ignitability, corrosivity or selected reactivity characteristic of Subpart C, is not a listed waste in Subpart D, and contains no or insignificant levels of Appendix VIII constituents.	
<b><u>D-1b Trial Burn</u></b>	122.25(b)(5)(ii) 122.27(b)
If the applicant decides to conduct a trial burn to prove the incinerator can meet the required performance standards under the established operating conditions, a trial burn plan must be submitted.	
<b><u>D-1b(1) Trial Burn Plan</u></b>	122.27(b)(1)
The trial burn plan should provide all the specific informational requirements for incinerators that must be submitted with the Part A Application. Subparts B through H of Part 264 must also be satisfied. Information submitted in the trial burn plan should satisfy requirements of Part 264, Subpart D.	
<b><u>D-1b(1)(a) Waste Analysis</u></b>	122.27(b)(1)(i) 264.341
See Subject Requirement C, Waste Characteristics for specifics.	

Subject requirement

in CFP  
section nos.

E-2a(2) (continued)

piping, ductwork, pollution control devices, etc., must be inspected daily for leaks, spills, and fugitive emissions. All emergency waste feed cut-off valves must be inspected at least weekly to verify proper operation. All system alarms must also be tested daily. Means of testing must be discussed.

~~Emergency Contingency Plan~~

122.25(a)(7)  
264.50- through  
264.56

~~A copy of the Contingency plan or spill prevention control and Countermeasures (SCCC) plan approved for hazardous waste management to describe the actions facility personnel will take in response to fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, surface water, or groundwater at the facility.~~

~~F-1 General Information~~

~~Facility name and location, operator, site plan, and description of facility operations.~~

~~F-2 Emergency Coordinators~~

~~Names, addresses, office and home phone numbers, and duties of primary and alternate coordinators and a statement authorizing designated coordinators to commit the necessary resources to implement the contingency plan.~~

264.52(d)  
264.55

~~F-3 Implementation~~

~~A description of how and when the contingency plan will be implemented.~~

264.52(a)  
264.56(d)

~~F-3a Notification~~

~~Methodology for immediate notification of facility personnel and necessary state or local agencies.~~

264.56(a)

~~F-3b Identification of Hazardous Materials~~

~~Available data and/or procedures for identification of hazardous materials involved in the emergency and quantity and areal extent of release. Information on biological, physical and chemical properties of the waste, including vapor pressure, density, solubility, and potential hazards (e.g., toxic, explosive, reactive) should also be determined.~~

264.56(b)

40 CFR Section Nos.	Subject requirement
264.112 264 Appendix II	<p><b>11-2a Operating Record</b></p> <p>A description of the operating record maintained at the facility until closure. The record must include a description of each waste, the quantity of the waste and the unit(s) of treatment and disposal, including handling codes of each waste at the facility and the accompanying manifest number. Waste descriptions must include EPA Hazardous Waste Numbers, state the physical form of the waste and briefly describe the process that produced it.</p> <p>The Operating Record must include results from monitoring the following while operating the incinerator: combustion temperature; waste feed; (b) levels; and, if requested by the Regional Administrator, sampling and analysis of waste emissions.</p> <p>The Operating Record must also include results from (at least) daily inspection of the incinerator, related equipment and emergency feed cut-off controls for leaks, spills, and fugitive emissions.</p> <p><b>11-2b Reporting</b></p> <p>A statement that an annual report will be submitted to the Regional Administrator describing facility activities according to Appendix II (EPA form 8700-12, 4-80).</p> <p><b>PART I - CLOSURE PLANS</b></p> <p><b>1-1a Partial Closure</b></p> <p>If partial closure is anticipated, a description of how and when the facility will be partially closed, including an identification of the maximum extent of operation after partial closure.</p> <p><b>1-1b Final Closure</b></p> <p>A description of how and when the facility will be finally closed.</p> <p><b>1-1c Maximum Waste Inventory</b></p> <p>A description of the maximum inventory of wastes that could be in storage and treatment at any time.</p>
264.347(a) 264.347(b)	<p><b>11-2a Operating Record</b></p> <p>A description of the operating record maintained at the facility until closure. The record must include a description of each waste, the quantity of the waste and the unit(s) of treatment and disposal, including handling codes of each waste at the facility and the accompanying manifest number. Waste descriptions must include EPA Hazardous Waste Numbers, state the physical form of the waste and briefly describe the process that produced it.</p> <p>The Operating Record must include results from monitoring the following while operating the incinerator: combustion temperature; waste feed; (b) levels; and, if requested by the Regional Administrator, sampling and analysis of waste emissions.</p> <p>The Operating Record must also include results from (at least) daily inspection of the incinerator, related equipment and emergency feed cut-off controls for leaks, spills, and fugitive emissions.</p> <p><b>11-2b Reporting</b></p> <p>A statement that an annual report will be submitted to the Regional Administrator describing facility activities according to Appendix II (EPA form 8700-12, 4-80).</p> <p><b>PART I - CLOSURE PLANS</b></p> <p><b>1-1a Partial Closure</b></p> <p>If partial closure is anticipated, a description of how and when the facility will be partially closed, including an identification of the maximum extent of operation after partial closure.</p> <p><b>1-1b Final Closure</b></p> <p>A description of how and when the facility will be finally closed.</p> <p><b>1-1c Maximum Waste Inventory</b></p> <p>A description of the maximum inventory of wastes that could be in storage and treatment at any time.</p>
122.25(a)(13); 264.110-264.115 264.351 122.25(a)(13) 264.112	<p><b>11-2a Operating Record</b></p> <p>A description of the operating record maintained at the facility until closure. The record must include a description of each waste, the quantity of the waste and the unit(s) of treatment and disposal, including handling codes of each waste at the facility and the accompanying manifest number. Waste descriptions must include EPA Hazardous Waste Numbers, state the physical form of the waste and briefly describe the process that produced it.</p> <p>The Operating Record must include results from monitoring the following while operating the incinerator: combustion temperature; waste feed; (b) levels; and, if requested by the Regional Administrator, sampling and analysis of waste emissions.</p> <p>The Operating Record must also include results from (at least) daily inspection of the incinerator, related equipment and emergency feed cut-off controls for leaks, spills, and fugitive emissions.</p> <p><b>11-2b Reporting</b></p> <p>A statement that an annual report will be submitted to the Regional Administrator describing facility activities according to Appendix II (EPA form 8700-12, 4-80).</p> <p><b>PART I - CLOSURE PLANS</b></p> <p><b>1-1a Partial Closure</b></p> <p>If partial closure is anticipated, a description of how and when the facility will be partially closed, including an identification of the maximum extent of operation after partial closure.</p> <p><b>1-1b Final Closure</b></p> <p>A description of how and when the facility will be finally closed.</p> <p><b>1-1c Maximum Waste Inventory</b></p> <p>A description of the maximum inventory of wastes that could be in storage and treatment at any time.</p>
264.112(a)(1) 264.112(a)(12)	<p><b>11-2a Operating Record</b></p> <p>A description of the operating record maintained at the facility until closure. The record must include a description of each waste, the quantity of the waste and the unit(s) of treatment and disposal, including handling codes of each waste at the facility and the accompanying manifest number. Waste descriptions must include EPA Hazardous Waste Numbers, state the physical form of the waste and briefly describe the process that produced it.</p> <p>The Operating Record must include results from monitoring the following while operating the incinerator: combustion temperature; waste feed; (b) levels; and, if requested by the Regional Administrator, sampling and analysis of waste emissions.</p> <p>The Operating Record must also include results from (at least) daily inspection of the incinerator, related equipment and emergency feed cut-off controls for leaks, spills, and fugitive emissions.</p> <p><b>11-2b Reporting</b></p> <p>A statement that an annual report will be submitted to the Regional Administrator describing facility activities according to Appendix II (EPA form 8700-12, 4-80).</p> <p><b>PART I - CLOSURE PLANS</b></p> <p><b>1-1a Partial Closure</b></p> <p>If partial closure is anticipated, a description of how and when the facility will be partially closed, including an identification of the maximum extent of operation after partial closure.</p> <p><b>1-1b Final Closure</b></p> <p>A description of how and when the facility will be finally closed.</p> <p><b>1-1c Maximum Waste Inventory</b></p> <p>A description of the maximum inventory of wastes that could be in storage and treatment at any time.</p>

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is required of all incinerator facilities (supplied either through trial burn or data in lieu of a trial burn):

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Parameter To Evaluate	Information Required for Evaluation	40 CFR Section
Compliance with Performance Standards		
A.) Calculate Destruction and Removal Efficiency (DRE), determined by trial burn (either trial burn plan or data in lieu of trial burn)	1. Mass feed rate of each POHC in waste feed (% by weight of feed) X (feed rate/hr. 2. Mass discharge-rate POHC in exhaust gas (POHC concentration in stack) X (stack gas flow rate) 3. Calculate DRE $DRE = \frac{W_{in} - W_{out}}{W_{in}} \times 100 \%$	122.25(b)(5)(iii) (G) or 122.27(b)(2)(vi), <u>et seq.</u>  264.343(a)
B.) Calculate HCl emissions: 1.8 kg/hr or 99% removal of HCl in gas prior to APCD, which ever is higher	1. Weight % elemental Cl in waste feed 2. Waste feed rate 3. Stack gas volumetric flow rate 4. HCl stack concentration	264.343(b)
C.) Calculate particulate emissions: no more than 180 mg/dscm corrected for O <sub>2</sub>	1. Weight of collected particles 2. Stack gas volumetric flow rate 3. O <sub>2</sub> stack gas concentration by ORSAT 4. Calculate: $P_C = P_m \times \frac{14}{21-Y}$	264.343(c)

The following information, for new facilities, is not specifically required by the regulations. The permit writer, however, is required to evaluate the design of a new facility, to determine whether the facility reasonably will achieve the performance requirements of the regulations. Thus, the following information is necessary and will be required under the permit writer's general authority to request information:

# I. Incinerator Design and Operation

Parameter/ Item evaluated	Information required for evaluation
A) Maximum residence time	<ol style="list-style-type: none"><li>1. Length of combustion chamber</li><li>2. Cross-sectional area of combustion chamber<ul style="list-style-type: none"><li>° Inside diameter after refractory is installed</li></ul></li><li>3. Estimated volumetric flow rate of gases through combustion chamber (acfm)<ul style="list-style-type: none"><li>° Approximate combustion gas flow rate (scfm) (can be estimated from fan and/or blower capacities)</li><li>° Temperature in combustion chamber</li></ul></li><li>4. For rotary kiln, kiln slope and rotational velocity (rpm) are needed in addition to 1. and 2. above</li></ol>
B) Turbulence	
a. Superficial velocity	<ol style="list-style-type: none"><li>1. Volumetric flow rate of gases through combustion chamber (acfm). See A-3 above</li><li>2. Cross-sectional area of chamber. See A-2 above</li></ol>
b. Reynolds number	<ol style="list-style-type: none"><li>1. Combustion chamber diameter</li><li>2. Volumetric flow of gases through combustion chamber (acfm)</li><li>3. Cross-sectional area of combustion chamber</li><li>4. Gas density (approximate)</li><li>5. Gas viscosity (approximate)</li></ol>

# I. Incinerator Design and Operation

Parameter/ Item evaluated	Information required for evaluation
C) Combustion zone temperature	
Method a. Heat in heat out equation	<ol style="list-style-type: none"> <li>1. Waste feed rate (lb/h)</li> <li>2. Fuel feed rate (lb/h)</li> <li>3. Waste heat content (Btu/lb)</li> <li>4. Fuel heat content (if auxiliary fuel is natural gas, distillate or residual or other fuel. Where information on heat content is readily available, applicant need not submit this information)</li> <li>5. Excess air proposed</li> <li>6. Elemental composition of waste feed and auxiliary fuel</li> </ol>
Method b. Adiabatic temperature graph	<ol style="list-style-type: none"> <li>1. Waste heat content (Btu/lb)</li> <li>2. Excess air (%)</li> </ol>
D) Excess air	<ol style="list-style-type: none"> <li>1. Stoichiometric oxygen or air requirements (see I-C)</li> <li>2. Volumetric flow rate of primary combustion air (scfm)</li> </ol>
E) Net heating value (NHV) of waste feed or auxiliary fuel	<ol style="list-style-type: none"> <li>1. Gross heating value of waste and/or fuel (Btu/lb)</li> <li>2. Elemental composition of waste and/or fuel feed</li> <li>3. Water content of waste and/or fuel feed</li> <li>4. Waste and/or fuel feed rate</li> </ol>
F) Correlation between proposed excess air rate and temperature	<ol style="list-style-type: none"> <li>1. Net heating value of waste               <ul style="list-style-type: none"> <li>• Gross heating value of waste (Btu/lb)</li> <li>• Elemental composition of waste feed (C,H,O)</li> <li>• Waste feed rate</li> </ul> </li> </ol>
G) combined heating value of waste and fuel	<ol style="list-style-type: none"> <li>1. NHV of waste (see II-E)</li> <li>2. NHV of fuel (see II-E)</li> <li>3. Feed rate of waste</li> <li>4. Feed rate of fuel</li> <li>5. Total feed rate</li> </ol>

## II. Pollution Control Equipment Design and Operation

Parameter/ item evaluated	Information required for evaluation
	<ol style="list-style-type: none"> <li>4. Flow rate of scrubbing liquid (gpm)</li> <li>5. Volumetric flow rate of gases into scrubber (acfm)</li> <li>6. Temperature of combustion gases into scrubber</li> <li>7. Pressure drop across scrubber or, if applicable, packing manufacturer's graphs showing pressure drop as a function of liquid and gas loading rates</li> <li>8. Diameter of plate perforations if applicable</li> <li>9. Distance between each tray if applicable</li> <li>10. Approximate density of combustion gas</li> <li>11. Approximate density of scrubber liquid</li> </ol>
D) Mist eliminator	<ol style="list-style-type: none"> <li>1. Pressure drop across demister</li> <li>2. Construction of mist eliminator               <ul style="list-style-type: none"> <li>• Fiber bed</li> <li>• Wire mesh</li> <li>• Chevron-type</li> </ul> </li> <li>3. Diameter of demister</li> <li>4. Flow rate of combustion gases into demister (acfm)</li> </ol>
E) Electrostatic precipitators (ESP's)	<ol style="list-style-type: none"> <li>1. Total collecting surface area</li> <li>2. Drift velocity used in design (usually ranges from 0.1 to 0.65 ft/s)</li> <li>3. Gas velocity through ESP (8 to 20- ft/s--2 to 8 ft/s for dry)</li> </ol>